Claims

1. (Currently Amended) A method of increasing an immune response to an opportunistic infection in an immunocompromised subject comprising

selecting an immunocompromised subject infected with a secondary infection;

administering to the immunocompromised subject infected with the secondary infection a therapeutically effective amount of an immunostimulatory D oligodeoxynucleotide, wherein the D oligodeoxynucleotide is at least 18 nucleotides to about 30 nucleotides in length and comprises a sequence represented by the following formula:

5' $X_1X_2X_3$ Pu_1 Py_2 CpG Pu_3 Py_4 $X_4X_5X_6(W)_M(G)_N$-3' (SEQ ID NO : 22)

wherein the central CpG motif is unmethylated, Pu is a purine nucleotide, Py is a pyrimidine nucleotide, X and W are any nucleotide, M is any integer from 0 to 10, and N is any integer from 4 to 10; and

~~evaluating~~ assessing the immune response to the secondary infection in the subject;

thereby increasing the response to the secondary infection in the immunocompromised subject.

2. (Previously Presented) The method of claim 1, wherein the subject is immunocompromised as a result of an infection with human immunodeficiency virus (HIV) or a simian immunodeficiency virus.

3. (Canceled).

4. (Previously Presented)) The method of claim 2, wherein the human immunodeficiency virus is HIV-1.

5. (Previously Presented) The method of claim 2, wherein the human immunodeficiency virus is HIV-2.

6. (Original) The method of claim 1, wherein the subject has acquired immune deficiency syndrome (AIDS).

7. (Canceled).

8. (Previously Presented) The method of claim 1, wherein N is 6.

9. (Previously Presented) The method of claim 1, wherein Pu_1 Py_2 CpG Pu_3 Py_4 comprises phosphodiester bases.

10. (Previously Presented) The method of claim 1, wherein $Pu_1Py_2CpGPu_3$ Py_4 are phosphodiester bases.

11. (Previously Presented) The method of claim 1, wherein $X_1X_2X_3$ and $X_4X_5X_6(W)_M(G)_N$ comprise phosphodiester bases.

12. (Previously Presented) The method of claim 1, wherein $X_1X_2X_3$ comprises one or more phosphothioate bases.

13. (Previously Presented) The method of claim 1, wherein $X_4X_5X_6(W)_M(G)_N$ comprises one or more phosphothioate bases.

14. (Previously Presented) The method of claim 1, wherein $X_1X_2X_3$ Pu_1Py_2 and Pu_3 Py_4 $X_4X_5X_6$ are self complementary.

15. (Previously Presented) The method of claim 1, wherein the secondary infection is a bacterial infection, a fungal infection, a viral infection, a protozoan infection, a prion disease, or a neoplasm.

16. (Previously Presented) The method of claim 1, wherein the secondary infection is infection with *Leishmania*.

17. (Previously Presented) The method of claim 1, wherein the secondary infection is salmonellosis, syphilis, neurosyphilis, turberculosis, atypical mycobacterial infection, bacillary angiomatosis, aspergillosis, candidiasis, coccidioidomycosis, cryptococcal meningitis, hepatitis B, histoplasmosis, cryptosporidiosis, isosporiasis, microsporidiosis, *Pneumocystis Carinii* pneumonia, toxoplasmosis, *Cytomegalovirus*, hepatitis, herpes simplex, herpes zoster, human papiloma virus, *Molluscum Contagiosum*, oral hairy leukoplakia, progressive multifocal leukoencephalopathy, Kaposi's sarcoma, systemic non-Hodgkin's lymphoma, or primary CNS lymphoma.

18. (Previously Presented) The method of claim 4, further comprising administering to the subject a combination of drugs which comprises a highly active anti-retroviral therapy (HAART).

19. (Original) The method of claim 2, further comprising administering an anti-retroviral drug.

20. (Previously Presented) The method of claim 19, wherein the anti-retroviral drug comprises 3'-azido-3'dexoy-thymidine (AZT).

21. (Original) The method of claim 1, wherein the oligodeoxynucleotide comprises a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, and SEQ ID NO: 16.

22. (Original) The method of claim 1, wherein the oligodeoxynucleotide is a K oligonucleotide that comprises a sequence represented by the formula:

5'-$N_1N_2N_3$T-CpG-W$N_4N_5N_6$-3' (SEQ ID NO: 20)

wherein the central CpG motif is unmethylated, W is A or T, and N_1, N_2, N_3, N_4, N_5, and N_6 are any nucleotides.

23. (Canceled).

24. (Canceled).

25. (Currently Amended) A method of increasing an immune response to an opportunistic infection with a pathogen in an immunocompromised subject, comprising

selecting an immunocompromised subject wherein the subject is immunocompromised as a result of an infection with a human immunodeficiency virus; and

administering to the subject a therapeutically effective amount of an immunostimulatory D oligodeoxynucleotide,

wherein an antigenic epitope of a polypeptide from the pathogen is not administered to the subject,

thereby increasing the response to the opportunistic infection.

26. (Previously Presented) The method of claim 1, wherein the oligodeoxynucleotide has the nucleic acid sequence set forth as 5'XXTGCATCGATGCAGGGGGG 3' (SEQ ID NO: 1), wherein X is a G.

27. (Previously Presented) The method of claim 1, wherein the oligodeoxynucleotide consists of the nucleic acid sequence set forth as SEQ ID NO: 177.

28. (Previously Presented) The method of claim 25, wherein the pathogen is Listeria.

29. (Previously Presented) The method of claim 25, wherein the D oligodeoxynucleotide consists of the nucleotide sequence set forth as SEQ ID NO: 177.

30. (Previously Presented) The method of claim 1, wherein the subject is immunocompromised as a result of chronic granulomatous disease.

31. (Previously Presented) The method of claim 2, wherein the D oligodeoxynucleotide consists of the nucleotide sequence set forth as SEQ ID NO: 177.

32. (Previously Presented) The method of claim 31, wherein the wherein the subject is immunocompromised as a result of an infection with a human immunodeficiency virus.

33. (Previously Presented) The method of claim 1, wherein the secondary infection is hepatitis B, and wherein evaluating the immune response comprises evaluating an immune response to a hepatitis B antigen.

34. (Previously Presented) The method of claim 1, wherein evaluating an immune response to a hepatitis B antigen comprises determining an amount of antibodies to hepatits B in the serum of the subject.